

## FLASH REPORT

**PROGRAM:** Goddard Replica Test

**DATE:** May 27, 03

**TEST NUMBER:** P2354-25 & 26

**SCHEDULED DURATION/ACTUAL DURATION:**  
11.0 secs (max) / 11.004 and 11.005 secs

**HARDWARE:** Goddard Replica Chamber assembly  
Injector: S/N 005  
Chamber Shell: #8, aluminum shell, alumina + silica phenolic liner  
Throat Washer: Molybdenum-Tungsten  
Nozzle: #3 SS alumina liner

**OBJECTIVE:** Flight Duration

**CONDITIONS:** MR ~ 1.5 / Pc ~ 50 psig.

### COMMENTS:

Tests 25 and 26 of the Goddard Replica Thruster were attempted today. The purpose of these tests was to test the silica phenolic liner inside an aluminum chamber shell at a mixture ratio of 1.5. Test duration for both tests was 11 seconds. Test 25 was successful with a duration of 11.004 seconds and no chamber burn through. A post test 25 boroscope indicated that liner performance was satisfactory and sufficient liner remained to attempt test 26 at the same conditions as test 25. At approximately 9.1 seconds into test 26, the nozzle just downstream of the throat burned through. The tungsten washer and nozzle have been installed for tests 20 through 26 for a total test time of 58.8 seconds. Once the chamber is removed from the test stand a boroscope will be completed to determine chamber liner performance. Measured thrust was 14 pounds for both tests. The next test is TBD.

Orig. signed by P Dumbacher

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TD71 Test Conductor

cc:

DA01/Mr Sackheim  
TD01/Mr. London  
TD61/Mr. Leopard  
TD61/Ms. Jacobs  
TD61/Ms. Elam  
TD61/Mr. Peters  
TD61/Mr. Dennis  
TD61/Mr. Trinh  
TD70/Mr Allen  
TD71/Mr. Hubbard  
TD71/Mr. Sanders  
TD71/Mr. Cooper  
TD71/Mr. Gautney  
TD72/Mr. Hamilton  
TD72/Ms. Farr  
TD72/Mr. Elmore  
TD72/Mr. Cecil  
TD72/Mr. Soohoo  
TD73/Mr. Blankenship  
TD73/Mr. Trieu  
TD73/Mr. Hipp  
QS10/Ms. Shepherd  
QS10/Mr. Kennedy  
QS50/Ms. Robinson  
ARCATA/Mr. Bone  
ARCATA/Mr. Leibold  
ARCATA/Mr. Olive  
ARCATA/Mr. Steele  
ARCATA/Mr. Vernon  
ASRI/ Mr. Farbman  
CSC/Mr. Jarrell  
ERC/Ms. Osborne  
HEI/Mr. Springfield  
LB&B/Mr. Ortner  
LB&B/Ms Nave  
LB&B/Ms Couch  
LB&B/Mr. Crunk  
LB&B/Mr. Flowers  
LB&B/Mr. Havens  
LB&B/Mr. Knox  
LB&B/Mr. Treece  
QUALIS/Mr. Cousins  
Sverdrup/Mr. Hicks